

BILLING STANDARDS AND PROCEDURES FOR NET-METERING CUSTOMERS

I. Purpose and Applicability: The purpose of these billing standards and procedures is to implement uniform billing practices with respect to net-metering customers pursuant to 30 V.S.A. 219a and Board Rule 5.100. The procedures are applicable to all net-metered generation systems.

II. Definitions: "Residential Rate" means the kWh rate component of the serving utility's general residential rate schedule that consists of two rate components: a service charge and a kWh rate, excluding time-of-use and demand rates. If a utility's general residential rate schedule includes inclining block rates, the residential rate for this calculation shall be the highest of those block rates.

"Production Meter" means an electric meter that measures the amount of kWh produced by a net-metered generation source.

"Billing Meter" means an electric meter that measures the consumption of electricity by a utility customer.

III. Customer Billing Requirements: The bill of a net-metering customer should include the amount of any credits for generation carried forward from the previous months, the amount of credits for generation that have expired in the current month, the amount of credits generated in the current month, the amount of credits for generation remaining, the total kWh generated by the generation source(s), (if separately metered), the total kWh allocated to a group net metering customer, and the credits for solar generation.

IV. Membership in Multiple Net Metering Groups: Individual customer accounts may be enrolled in only one group net metering arrangement at one time. Customers with multiple accounts may enroll each of the accounts in separate group net metering arrangements at one time. In addition, groups may, subject to Board approval, have more than one source of generation attributed to the group, may increase the capacity of existing generation attributed to the group, and may merge separate groups.

V. Demand and TOU Customer Interconnection Requirements: In order for a demand or time-of-use ("TOU") customer to receive kWh credit valued at the utility's residential rate, the customer must, at its own expense, install a separate meter to measure production from the generation source and the generator must be interconnected directly to the utility grid such that the generation does not offset consumption measured by the customer's meter or meters.

VI. Billing for Customers with One Billing Meter : In the case of a customer account with a Billing Meter measuring net consumption, the billing credit calculation is made by multiplying any excess production registered on the meter by the underlying energy rate for that customer and applying that credit to the customer's bill. The following examples illustrate the billing calculation in this case:

Example 1: a residential customer has a rate of \$.10 and a generation system physically connected to the customer's Billing Meter. In one month the generation system produces 100 kWh and the customer consumes 50 kWh. The Billing Meter would register a negative 50 kWh and result in a monetary credit of \$5.00 (50 kWh x \$.10) to be applied to the customer's bill for that month.

Example 2: a demand customer has an energy component rate of \$.08 with a separate demand charge, and a generation system connected to the Billing Meter. In one month the generation system produces 100 kWh and the customer consumes 50 kWh. The Billing Meter would register a negative 50 kWh and result in a monetary credit of \$4.00 (50 kWh x \$.08) to be applied to the customer's bill for that month.

Example 3: a TOU customer has a Billing Meter that includes a peak register and an off-peak register with the generation system connected to the Billing Meter. The kWh rate for the peak period is \$.20 and the kWh rate for the off-peak period is \$.10. In one month the off-peak register reads a negative 50 kWh while the peak register shows consumption of 100 kWh. The 50 kWh of excess production in the off-peak period would be credited against the 100 kWh of consumption leaving 50 kWh of peak generation to be billed to the customer at the peak rate of \$.20.

Example 4: a TOU customer has a Billing Meter that includes a peak register and an off-peak register with the generation system connected to the Billing Meter. The kWh rate for the peak period is \$.20 and the kWh rate for the off-peak period is \$.10. In one month the peak register reads a negative 200 kWh while the off-peak register shows consumption of 50 kWh. The 200 kWh of excess production in the peak period would be credited against the 50 kWh of consumption leaving 0 kWh of off-peak generation to be billed to the customer. The remaining 150 kWh on the peak register would create a monetary credit of \$30.00 (150 kWh x \$.20) to be applied to the customer's bill.

Example 5: a residential customer has a rate of \$.10 and a solar generation system physically connected to the Billing Meter. There is also a Production Meter connected to the generation source measuring total energy production. The utility's solar generation credit rate is \$.06. In one month the generation system produces 100 kWh and the customer consumes 50 kWh. The Billing Meter would register a negative 50 kWh and result in a monetary credit of \$5.00 (50 kWh x \$.10). A monetary credit for solar generation of \$6.00 (100 kWh x \$.06) would also be applied to the customer's bill.

Example 6: a TOU customer has a Billing Meter that includes a peak register and an off-peak register with the solar generation system connected to the Billing Meter. The kWh rate for the peak period is \$.20 and the kWh rate for the off-peak period is \$.10. There is also a Production Meter connected to the generation source measuring total energy production. The utility's solar generation credit rate is \$.06. In one month the generation system produces 100 kWh. The off-peak register reads a negative 50 kWh while the peak register shows consumption of 100 kWh.

The 50 kWh of excess production in the off-peak period would be credited against the 100 kWh of consumption leaving 50 kWh of peak generation to be billed to the customer at the peak rate of \$.20. A monetary credit for solar generation of \$6.00 (100 kWh x \$.06) would also be applied to the customer's bill.

VII. Billing for Group Systems and Customers with Multiple Billing Meters: In the case of a single customer with multiple Billing Meters or a group of customers where the generation is interconnected to the utility grid such that the generation does not offset consumption of the customer or group, the billing calculation involves allocating the total production associated with the group in the manner prescribed by the group to each group member. Each customer is credited at the underlying energy rate for that customer. In the case of demand or time-of-use customers under this scenario, the calculation is the same except that the customer is credited at the residential energy rate rather than the demand or TOU energy rate. Under this scenario customers are required to install a Production Meter to measure total generation.

In the case of a single customer with multiple Billing Meters or a group of customers where the generation is physically connected to a Billing Meter such that the generation offsets consumption of the customer or group member(s), the billing calculation involves allocating the net production on the Billing Meter(s) in the manner prescribed by the group to each group member. Each customer is credited at the underlying energy rate for that customer. In the case of demand or time-of-use customers under this scenario, the calculation is the same and the customers are credited at the demand or TOU energy component rate. Under this scenario, installation of a Production Meter is optional.

Customers or groups may allocate monetary credits on a percentage basis to each group member account or they may elect to allocate credits such that the bill of one member or account is first offset, with any additional credits applied to the next group member(s) or account(s) in an order selected by the customer or group.

The following examples illustrate how the credits are applied in group settings:

Example 1: a group system consists of 2 residential customers each with a residential rate of \$.10. The net metering system consists of a solar generator with a Production Meter at the generation source measuring total generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have allocated generation 50% to each. In one month, the solar generator produces 150 kWh. The utility's solar incentive payment is \$.06 per kWh produced.

In this example, each customer would receive a monetary credit of \$7.50 (\$.10 x 75 kWh) associated with generation on their respective bills. Each customer would also receive a monetary credit of \$4.50 (75 kWh x .06) equal to 50% of the solar credit payment.

Example 2: a group system is comprised of 2 residential customers A and B, each with a rate of \$.10, one demand customer, Customer C, with an energy rate of \$.05, and one small commercial (non-demand) customer, Customer D, with a rate of \$.08. The net-metering system consists of a

solar generator with a Production Meter at the generation source measuring generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have allocated generation 25% to each. In one month, the solar generator produces 180 kWh. The utility's solar incentive payment is \$.06 per kWh produced.

In this example, Customers A, B, and C would each receive a monetary credit of \$4.50 (45 kWh x \$.10) on their respective bills. Customer D would receive a monetary credit of \$3.60 (45 kWh x \$.08). Each customer would also receive an additional monetary credit of \$2.70 (45 kWh x .06) equal to 25% of the solar credit payment.

Example 3: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of \$.10. The net metering system consists of a wind turbine generator physically connected to the Billing Meter of Customer A. The customers have allocated generation 50% to each. In one month, Customer A's Billing Meter registers a negative 50 kWh.

In this example, each customer would receive a monetary credit of \$2.50 (25 kWh x .10) on their respective bills.

Example 4: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of \$.10. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer A. The customers have allocated net production 50% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar credit payment is \$.06 per kWh produced. In one month, the Production Meter registers 100 kWh of production and Customer A's Billing Meter registers a negative 50 kWh.

In this example, each customer would receive a monetary credit of \$2.50 (25 kWh x .10) on their respective bills. Each customer would also receive a monetary credit of \$3.00 (50 kWh x .06) equal to 50% of the solar credit payment.

Example 5: a group system is comprised of one residential customer (Customer A) with a residential rate of \$.10, and one demand customer (Customer B) with an energy rate of \$.05. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer B. The customers have allocated net production 50% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar credit payment is \$.06 per kWh produced. In one month, the Production Meter registers 400 kWh of production and Customer A's Billing Meter registers consumption of 1000 kWh.

In this example, there is no net generation to be allocated. Each customer would receive a monetary credit of \$12.00 (200 kWh x \$.06) equal to 50% of the solar credit payment.

Example 6: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of \$.10, one small commercial customer (Customer C) with a rate of \$.08, and a TOU customer (Customer D) with a peak rate of \$.15 and an off-peak rate of \$.07. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer A. The customers have allocated net production 25% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar incentive payment is \$.06 per kWh produced. In one month, the Production Meter registers 100 kWh of production. Customer A's Billing Meter registers a negative 50 kWh, and Customer D's meter registers consumption of 120 kWh peak and 80 kWh off-peak.

In this example, Customers A and B would receive a monetary credit of \$1.25 ($12.5 \text{ kWh} \times \1.0), Customer C would receive a monetary credit of \$1.00 ($12.5 \text{ kWh} \times .08$), Customer D would receive a monetary credit of \$1.48 ($(12.5 \text{ kWh} \times 60\% \times \$1.5) + (12.5 \text{ kWh} \times 40\% \times \$0.7)$). Each customer would also receive a monetary credit of \$1.50 ($25 \text{ kWh} \times \0.06) equal to 25% of the solar credit payment.

Example 7: a group system consists of 2 residential customers each with a residential rate of \$.10. The net metering system consists of a solar generator with a Production Meter at the generation source measuring total generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have elected to offset the bill of Customer A first with any remaining credit applied to Customer B's bill. In one month, the solar generator produces 500 kWh. The utility's solar incentive payment is \$.06 per kWh produced. Customer A's bill for the month is \$50.00 and Customer B's bill for the month is \$50.00

In this example, the total credit due to the group would be \$80 ($(500 \text{ kWh} \times \$1.0) + (500 \text{ kWh} \times \$0.06)$). Customer A's bill would be reduced to zero ($\$50.00 - \50.00) and Customer B's bill would be reduced to \$20.00 ($\$50.00 - \30.00).